

MSA/GS, ANL Short Course on Amphiboles Preface

The Short Course on “Amphiboles”, sponsored by the Mineralogical Society of America (MSA) and by the Accademia Nazionale dei Lincei (ANL), was held in Rome in October 2007. The aim of the Short Course was to update the scientific community on the extensive developments that have occurred over the last twenty years on many issues concerning the crystal-chemistry and systematics of the amphiboles, as well as their role in petrogenetic and environmental processes.

Amphiboles are a complex but fascinating group of minerals, which are currently the focus of several investigations in the realms of geology, petrology, mineralogy, environmental mineralogy, epidemiology and even biology. During the last two decades, most of our previous concepts on the crystal chemistry of amphiboles have had to be reformulated, owing to advances in analytical techniques (especially X-ray diffraction, SIMS analysis and infrared spectroscopy), the development of new comprehensive models and the extensive study of synthetic compositions. This new situation prompted the organization of the Short Course and the preparation of a new volume of the MSA/GSA Reviews in Mineralogy series. Volume 67 (Amphiboles: crystal chemistry, occurrence and health issues) has been edited by Frank C. Hawthorne, Roberta Oberti, Giancarlo Della Ventura and Annibale Mottana, bringing together 13 comprehensive review chapters on the major issues addressed during the workshop. These chapters are focused on concepts and results more than on techniques, including advances in crystal-chemical models, classification and nomenclature. They also present challenges and results regarding synthesis, long-range and short-range ordering, geological occurrences and health issues related to the distribution of natural amphiboles in the environment.

The present thematic issue of the European Journal of Mineralogy contains extensive reports on some of the open communications presented and discussed during the Short Course, which was attended by more than 50 scientists from many different countries. These contributions address the recognition and characterization of new end-members (Oberti et al., Robinson et al.), non-ambient in situ studies of synthetic compositions and the modelling of phase transitions (Della Ventura et al.), as well as strategies for the characterization of amphibole fibres (Bloise et al., Gunter et al. and Sanchez et al.).

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